3. Floating Pin

Materials:
- A small pin or needle
- Bowl or cup
- Concentrated dish soap
- Water

Method:
1. Fill bowl or cup with water and carefully place pin on surface. Hint: tweezers may help. The pin must be flat with the surface of the water. It will sink if it comes in at an angle.
2. Add a touch of soap.
3. Watch the pin sink!

4. Floating Paperclip

Materials:
- Paper clip
- Tissue paper or paper towel
- Cup or bowl
- Water

Method:
1. Fill cup with water and gently place a piece of tissue paper on the surface.
2. Carefully place a dry paperclip on the tissue.
3. The tissue should sink. If it doesn’t, give it a gentle push downward.

Tip: be sure that the cup and water are not soapy.

12. Surface Tension

Water molecules have a positive end and a negative end. The water molecule is not a sphere, and part of the water molecule pushes away from other water molecules. This is what makes water. It’s called surface tension. When you put a drop of water on a coin, it’s the surface tension that holds the water in place. If you want to make a dome of water on a coin, you need to add a layer of molecules on top of the water, and that layer of molecules is what gives the water its shape.

13. Why do water molecules want to be by each other? Molecules are attracted to each other because of the positively charged ends of the molecule. Water molecules want to be near each other because of the positive end of the molecule. This attraction is called cohesion. It helps water stay together.

Think of a big lake versus a dewdrop. Pretty big difference in size, right? That huge number with 21 zeros is called a sextillion, and it is a TRILLION TIMES BIGGER than one billion.

The dewdrop is SUPER small compared to the lake. But a water molecule is part positive (+) and part negative (-). Hydrogen bonds (≡) between water molecules create a dome of water on a coin. The water molecules are attracted to each other because of the positive ends of the molecule. This attraction is called cohesion. It helps water stay together.